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REMARKS

Claims 1-28 are currently pending in the subject application and are presently under consideration. A clean version of all pending claims is found at pages 2-5.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. **Rejection of Claims 1-2, 9-11, 14, 20-21, 24,25 and 28 Under 35 U.S.C. §102(b)**

Claims 1-2, 9-11, 14, 20-21, 24, 25 and 28 stand rejected under 35 U.S.C. §102(b) as being anticipated by the article "Lightweight Remote Procedure Call" by Bershad *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reason. Bershad *et al.* does not teach or suggest each and every limitation recited in the subject claims.

> "A claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). Emphasis added. "The identical invention must be shown in as complete detail as is contained in the...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The subject invention as disclosed and claimed relates to a system and method to enable communications between one or more (*e.g.*, managed to unmanaged) object systems, including an in-lined stub functionality employed to facilitate operational performance and communications between the object systems. (*See* pg. 1, ln. 7-10).

More particularly, the invention provides for a system and/or methodology that facilitates communications and execution performance *between managed and unmanaged code* environments. This facilitation is achieved by providing functional aspects and considerations of an *in-lined stub* having portions thereof incorporated within an execution framework of a calling function *between managed and unmanaged*

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code. It should be noted that this *"in-line stub"* is utilized *in lieu* of calling an external interface stub at run time. (*See* pg. 3, ln. 10-15).

Independent claim 1 (and similarly independent claims 14, 25 and 28) recites a system that facilitates communicating *between managed and unmanaged code.* Specifically, as claimed, the subject invention provides *a first component that is one of the managed and unmanaged code* and a caller associated with the first component, the caller invoking an object related to a second component, *the second component being one of the managed and unmanaged code,* the *caller including an in-lined stub that facilitates communications between the objects.*   :

Bershad *et al.* fails to teach or suggest such aspects of the claimed invention. Rather, Bershad *et al.* merely teaches a communication facility designed and optimized for communication *between protection domains on a same machine.* (*See* Section 1, Introduction).

Further, the invention as recited in the subject claims employs an *"in-lined stub"* to facilitate communications between objects. In accordance with various claims of the subject application, the in-lined stub is incorporated within the calling function. This technique is clearly different than calling a stub external to a calling function as is disclosed in the conventional system of Bershad *et al.*

Applicants' claimed in-lined stub facilitates higher processor execution performance than conventional systems and methods of calling an external stub routine. Bershad *et al.* on the other hand discloses that a client makes an LRPC by calling *into* a stub procedure. (*See* paragraph heading 3.2, page 45). This reference of calling *"into"* a stub procedure clearly indicates that the stub procedure as disclosed in Bershad *et al.* is not *"in-lined"* within a calling function as in applicants' claimed invention.

Contrary to assertions made in the subject Office Action, Bershad *et al.* does not teach or suggest employment of an in-lined stub as recited in the subject claims. Rather, Bershad *et al.* is silent with regard to actual location of the stub procedure. Applicants' representative submits that the Office Action is premised on an improper and unfounded assumption that the cited reference indicates that the stub is in-lined as in the claimed invention.

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In other words, Bershad *et al.* does not teach or suggest use of an *in-lined stub* as recited in independent claim 1 (and similarly in independent claims 14, 25 and 28) of the subject application let alone incorporating all or portions of the stub within a calling procedure as recited in the subject claims. For at least the foregoing reasons, applicants' representative respectfully submits that the type of call procedure disclosed by Bershad *et al.* is made according to conventional external stub calls which is subject to performance limitations and not "*in-lined*" as recited in the subject claims.

Moreover, Bershad *et al.* does not disclose or suggest communications between *managed and unmanaged code* as recited in the claims of the subject application. By way of example, an artisan will appreciate that managed code environments are noted in part by presence of a lifetime management function (*e.g.*, "garbage collector") for object management. Accordingly, unmanaged code environments require the objects themselves to manage object lifetimes. (*See* pg. 1-2, ln. 30-31, 1-6). Bershad *et al.* simply discloses communications *between protected and unprotected domains* as specifically related to security issues. Bershad *et al.* does not contemplate communication between *managed and unmanaged object code* as recited in the claims.

In view of the above, it is readily apparent that Bershad *et al.* does not anticipate or suggest an *in-lined stub* and/or communication *between managed and unmanaged code* as recited in independent claims 1, 14, 25 and 28 (and claims 2, 9-11, 20-21, 24 which depend respectively there from). Accordingly, withdrawal of this rejection is requested.

II.   Rejection of Claims 1-28 Under 35 U.S.C. §102(b)

Claims 1-28 stand rejected under 35 U.S.C. §102(b) as being anticipated by Nilsen *et al.* (U.S. 6,081,665). Withdrawal of this rejection is requested for at least the following reasons. Nilsen *et al.* does not teach or suggest each and every limitation recited in the subject claims.

Specifically, as with Bershad *et al.* discussed *supra*, Nilsen *et al.* is silent with regard to *managed and unmanaged code* as recited in the subject claims. Rather, Nilsen *et al.* merely teaches communications within a managed object environment and thus, does not disclose communications between *disparate objects* (*e.g.* managed/unmanaged) as recited in the claims of the subject application.

Furthermore, applicants' representative respectfully submits that Nilsen *et al.* employs an external stub to facilitate object communications *in lieu* of an *in-line stub* as in the claimed invention. Nilsen *et al.* simply describes a small procedure stub that is generated to represent each byte-code and native method in the system (*See* col. 15, lines 49-58). Although the Office Action contends that Nilsen *et al.* suggests that the stub is hard-coded into the caller's code, applicants' representative respectfully submits that Nilsen *et al.* does not teach or suggest the use of an "in-lined" stub "that facilitates communication between the objects" as disclosed and claimed in the subject application. Rather, Nilsen *et al.* suggests that "when performing special method invocation from within a JIT-translated method, the address of the called method (or at least a stub for the called method) is hard-coded into the caller's machine code." (*See* col. 14, ln. 4-6).

In view of the above, it is readily apparent that Nilsen *et al.* does not anticipate or suggest an *in-lined stub* and/or communication *between managed and unmanaged code* as recited in independent claims 1, 14, 25, 27 and 28 (and claims 2-13, 15-24 and 26 which respectively depend there from). This rejection should be withdrawn.

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CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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